



170350

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY POLLUTION REPORT

I. HEADING

DATE: April 25, 2000
SUBJECT: Gurnee Mercury Spill
FROM: Mike Harris, OSC, U.S. EPA, Region 5, EERB, RS-2

TO:

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POLREP No.: POLREP #3

II. BACKGROUND

Site: Gurnee Mercury Spill	Site No.: B5M4
Task Order No.: 16	Response Authority: CERCLA
CERCLIS No.: ILP200000272	NPL Status: Not on the NPL
State Notification: IEPA Notified	Action Memorandum Status: Pending
Incident Category: Emergency Response	Starting Date: March 30, 2000
Reporting Date: April 18 through April 22, 2000	Completion Date: Not Available

III. SITE DESCRIPTION

See POLREP #1 for site description.

IV. RESPONSE INFORMATION

A. Status of Actions

On Tuesday, April 18, 2000, U.S. EPA scheduled restoration activities at the Belle Plaine residence and remedial activities at the Magnolia residence for April 19, 2000. This was done based on the analytical results from the four air samples collected at the Magnolia (three) and Belle Plaine (one) residences on April 13, 2000. The air samples were collected using Gillian air sampling pumps and shipped to Armstrong Forensic Laboratory in Arlington, Texas.

On Wednesday, April 19, 2000, American Floor Show, Inc., a carpeting contractor, mobilized to the Belle Plaine residence to complete restoration activities at the location. Carpet padding and carpeting were installed throughout those portions of the house where contaminated carpeting had been removed as part of the remedial activities. Among the locations where carpeting was replaced were the two basement bedrooms, the living/dining room area on the main floor and the stairways and landings leading from the entrance door to the main floor and the basement. Simultaneously with the restoration activities at the Belle Plaine residence, the ERRS contractor performed decontamination activities at

the Magnolia residence. Prior to the beginning of remedial activities, START performed an air monitoring reconnaissance of the affected portions of the residence using a Jerome 431 Mercury Vapor Analyzer (MVA). Readings of 0.000 milligrams per cubic meter (mg/m^3) were reported for all monitored locations. Based on these data, the ERRS work plan was modified to wipe down all surface with water instead of Mersorb (HgX) solution. In accordance with the original work plan, the ERRS contractor heated the work area using a torpedo heater and simultaneously ventilated the area using two high volume blower/high-efficiency particulate air (HEPA) filter units. Decontamination activities were completed by the ERRS contractor between 1100 hours and 1415 hours. Following the completion of these activities, the ERRS contractor removed the torpedo heater and one of the blower/HEPA filter units. The second blower/HEPA filter unit was left running to provide overnight ventilation of the work area. START collected eight rounds of air monitoring data concurrently with ERRS performing decontamination activities. Between 1500 hours through 1600 hours, START and U.S. EPA completed an additional air monitoring reconnaissance of the residence as part of the field testing of a Lumex RA-915+ Zeeman mercury Spectrometer MVA. The unit, which detects mercury vapor at concentrations of nanograms per cubic meter (ng/m^3), or 1×10^{-9} grams per cubic meter, was used to "shadow" the Jerome during the reconnaissance. During the reconnaissance, it was noticed that readings were higher at portions of the floor where scratches were present than at non-scratched portions. As a result of this observation, two samples of the floor material were collected and tested using both the Jerome and the Lumex RA-915+. Mercury levels of $0.212 \text{ mg}/\text{m}^3$ and $26,000 \text{ ng}/\text{m}^3$ were detected for the first sample using the Jerome and Lumex RA-915+, respectively. The second sample recorded $0.144 \text{ mg}/\text{m}^3$ and $6,000 \text{ ng}/\text{m}^3$. From these results, it was concluded that the remedial measures being employed would not be sufficient to achieve the Agency for Toxic Substances and Disease Registry's (ATSDR) residential standard for mercury exposure of 0.0003 milligrams per cubic meter (mg/m^3), or $300 \text{ ng}/\text{m}^3$. As such, an alternate remedial plan will be designed for the Magnolia residence.

On Thursday, April 20, 2000, START and U.S. EPA observed ongoing decontamination/restoration activities at the Magnolia residence. The ERRS contractor replaced ceiling tiles that had been removed during the initial remedial/decontamination activities. These restoration activities were completed between 0945 hours and 1430 hours. START collected five rounds of air monitoring data throughout the duration of these restoration activities.

No onsite activities were performed at either the Belle Plaine or Magnolia residences on Friday, April 21, 2000.

B. Next Steps

1. Determine additional decontamination steps for Magnolia residence.
2. Complete decontamination of Magnolia residence.
3. Complete restoration of Magnolia residence.

C. Key Issues

The City of Gurnee Public Works Department has agreed to replace the concrete that was excavated along the culvert.

V. COST INFORMATION

As of 4/22/2000

Group	Ceiling Cost	Cost to Date	Remaining
ERRS	Unknown		
START	Unknown		
U.S. EPA	Unknown		
TOTAL			

VI. DISPOSAL INFORMATION

Disposition of Wastes Gurnee Mercury Spill Gurnee, Lake County, Illinois			
Wastestream	Quantity	Date	Disposal Facility
Waste Mercury, 8, UN2809, PGIII	100 pounds	3/31/00	Superior Special Services, Inc. 1275 Mineral Springs Dr. Port Washington, WI 53074
Waste Toxic Solid, inorganic, n.o.s. (mercury), 6.1, UN3288, PG III	10 yd ³	4/4/00	Onyx Environmental W124 N9451 Boundary Rd. Menomonee Falls, WI 53051
Waste Toxic Solid, inorganic, n.o.s. (mercury), 6.1, UN3288, PG III	15 yd ³	4/4/00	Superior Special Services, Inc. 1275 Mineral Springs Dr. Port Washington, WI 53074